

CLAIMS

1. A cyclonic separating apparatus for separating solid material from a fluid, comprising a separating chamber, an inlet communicating with the separating chamber for carrying the fluid with solid matter entrained therein to the separating chamber, and an
 5 outlet for carrying the fluid away from the separating chamber after the solid material has been separated therefrom, the outlet being formed by a conduit communicating with an interior portion of the separating chamber and having a longitudinal axis,

wherein a plurality of grooves are formed in an interior surface of the conduit and extend in the same direction as the longitudinal axis.

10 2. The cyclonic separating apparatus as claimed in claim 1, wherein the grooves extend substantially parallel to the longitudinal axis.

3. The cyclonic separating apparatus as claimed in claim 2, wherein the grooves extend along the conduit for at least one quarter of the length thereof.

15 4. The cyclonic separating apparatus as claimed in claim 3, wherein the grooves extend along the conduit for at least half of the length thereof.

5. The cyclonic separating apparatus as claimed in claim 4, wherein the grooves extend along substantially the entire length of the conduit.

6. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein each groove is identical to the other grooves.

20 7. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein each groove is triangular in shape.

8. The cyclonic separating apparatus as claimed in claim 1, 2 or 5, wherein each groove is rectangular in shape.

9. The cyclonic separating apparatus as claimed in claim 7, wherein the depth of each groove is less than the breadth of each groove.

10. The cyclonic separating apparatus as claimed in claim 7, wherein adjacent grooves are spaced apart from one another by portions of the interior surface of the conduit.

5 11. The cyclonic separating apparatus as claimed in claim 10, wherein the breadth of each groove is greater than the breadth of either of the portions of the interior surface adjacent the said groove.

10 12. The cyclonic separating apparatus as claimed in claim 10, wherein the breadth of each groove is substantially the same as the breadth of each portion of the interior surface adjacent the said groove.

13. The cyclonic separating apparatus as claimed in claim 10, wherein the portions of the interior surface of the conduit lie on a cylindrical surface.

14. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein the grooves are equiangularly spaced about the longitudinal axis.

15 15. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein at least four grooves are provided.

16. The cyclonic separating apparatus as claimed in claim 15, wherein at least eight grooves are provided.

20 17. The cyclonic separating apparatus as claimed in claim 16, wherein at least twelve grooves are provided.

18. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein the upstream end of the conduit is radiused on the outer surface thereof.

19. The cyclonic separating apparatus as claimed in claim 1, 2, 3, 4 or 5, wherein at least one inwardly projecting protrusion is provided adjacent at least one of the grooves.

20. The cyclonic separating apparatus as claimed in claim 19, wherein inwardly projecting protrusions are provided on both sides of the respective groove or grooves.

21. The cyclonic separating apparatus as claimed in claim 19, wherein the inwardly projecting protrusions extend along the whole of the length of the respective groove or
5 grooves.

22. The cyclonic separating apparatus as claimed in claim 19, wherein each groove has projections provided on both sides thereof.

23. (Canceled)

24. A cyclonic vacuum cleaner comprising the cyclonic separating apparatus as
10 claimed in claim 1, 2, 3, 4 or 5.

25. The cyclonic vacuum cleaner of claim 24, wherein the grooves are identical grooves that are triangular in shape and extend substantially the entire length of the conduit.